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Canova, Judy

From: Linnear, David
Sent: Tuesday, March 13, 2018 1:36 PM
To: Morris, James
Subject: FW: Review of Monitored Natural Attenuation Pilot Program Data Evaluation
Attachments: David Wilson 3_3_2018 review of April 21, 2017 Monitored Natural Attenuation Pilot Program Data Evaluation Report.pdf

Jim,
Left you a message just now about this.
David

From: Wilson, David
Sent: Friday, March 09, 2018 10:53 AM
To: Linnear, David
Subject: Review of Monitored Natural Attenuation Pilot Program Data Evaluation

David,

Attached is my review of the Review of Monitored Natural Attenuation Pilot Program Data Evaluation

Below is the link to down load the final SSPA report.

Thanks
Dave

<https://sspa.wetransfer.com/downloads/cac2d467ff78dcad2059bb9861204bb020180216190532/81f1ad8144a3ba5d1cd7edc4f9e2267a20180216190533/63ab1c>

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: March 9, 2018
SUBJECT: Review of Monitored Natural Attenuation Pilot Program Data Evaluation
FROM: David Wilson, Geologist, RRS #4
TO: David Linnear, RPM

I have reviewed the April 21, 2017 Monitored Natural Attenuation Pilot Program Data Evaluation Report, The April 21, 2017 Monitored Natural Attenuation Pilot Program Data Evaluation Response to comments and the April 21, 2017 Supporting Technical Information Summary. In addition, the U.S. EPA contractor S.S. Papadopoulos & Assoc., Inc. reviewed the same reports and developed the 2/16/2018 Report Evaluation of Monitored Natural Attenuation (MNA) at the Pristine Superfund Site, Reading, Ohio, (SSPA 2018.)

The new data and analysis presented in the reports still validates my August 25, 2016 MNA review findings, that the toe of the downgradient contaminant plume is expanding in size, is migrating and there is not adequate evidence that MNA is occurring at a sufficiently high rate to reduce groundwater concentrations to achieve the maximum contaminant level (MCL).

The EPA approved (11/30/2010) MNA Pilot Work Plan included a trigger to restart the extraction well system if the following criteria were met.

1. Increasing VOC concentrations (i.e. upward trends) along the down gradient boundary of the current monitoring network;
2. Increased frequency of VOC detections in down gradient wells compared to pre-shutdown conditions; and,
3. Evidence for contaminant migration to the east of wells MW95 and MW101, beyond the extent of the current monitoring network.

My analysis in conjunction with the SSPA report (2018,) finds that the trigger criteria for re-starting the off-Site extraction wells has been met, and contingency actions are warranted.

Both assessments also indicate that that the current monitoring network is inadequate for assessing MNA, plume migration or plume expansion.

In addition to the specific areas listed above, overall natural attenuation rates for the lower aquifer are not known. The net rate of plume migration at the Site is a balance between the rate of natural attenuation and the rate of groundwater flow: if the rate of groundwater flow is greater

than the natural attenuation rate, the groundwater plume will continue to expand. It appears likely that MNA was able to prevent plume migration under (southward) hydraulic gradients that were lower than they have been since EW5 ceased pumping. This suggests that reductions in the hydraulic gradient along the downgradient edge of the current monitoring network would allow more time for natural attenuation processes to occur.